

PacifiCorp to study capture of carbon dioxide in coal plants

By Jim Polson and Greg Chang

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PacifiCorp, a utility owned by Warren Buffett's Berkshire Hathaway Inc., won a competition to study the construction of a Wyoming coal-fueled plant capable of capturing carbon dioxide, a gas blamed for global warming.

The Wyoming Infrastructure Authority agreed last week to conduct a joint feasibility study with PacifiCorp on the plant that may use technology known as IGCC, said Steve Waddington, executive director of the authority. There are two IGCC facilities operating in the U.S.

PacifiCorp's bid ranked highest of six submitted to the authority during an initial review completed Jan. 30. Wyoming Gasification & Synfuels was the other finalist. PacifiCorp needs the plant's output to meet rising demand by its 1.6 million customers in Wyoming and 10 other western U.S. states.

"We've essentially picked our development partner and reached agreement on terms to take these initial steps," Waddington said in a telephone interview.

The plant may use so-called integrated gasification combined cycle technology, or IGCC, in which coal gas is cleaned of impurities before burning to spin a power-generating turbine. Waste heat drives a secondary turbine, improving efficiency.

While conducting the feasibility study, the Wyoming authority also will begin seeking federal funding for the project, Waddington said. The U.S. Energy Policy Act of 2005 allows for a grant and loan guarantees for a demonstration plant using western coal. The plant must be built at an altitude of 4,000 feet (1,219 meters) or higher.

The Wyoming authority can sell as much as \$1 billion in bonds for energy projects. State lawmakers also are considering tax breaks for the project.

Following six to nine months of feasibility studies, which may cost \$2 million, PacifiCorp and the Wyoming authority will decide whether to pursue the project further. A next step may be detailed engineering and design, which would cost about \$20 million to \$30 million, Waddington said.

The Electric Power Research Institute, an industry think tank, and the U.S. Environmental Protection Agency said last year that gasification holds promise as the most efficient way to reduce carbon dioxide emissions from coal, the most abundant U.S. power-plant fuel.

Initial cost estimates of the IGCC facility for Wyoming are "considerably higher than conventional wisdom," Waddington said.

"It's not a pretty picture, and we're hoping that we can push those costs down," said Waddington, who declined to provide a specific estimate.

As part of the feasibility study, the two sides will examine the potential location and size of the facility and choose a power-plant technology vendor, he said. PacifiCorp originally proposed a 500-megawatt facility at its Jim Bridger Power Plant in southwestern Wyoming that would use Siemens A.G. technology.

Among other companies pursuing IGCC developments, NRG Energy Inc. won a competition in December to build New York's first coal-fueled power plant in 20 years with a gasification design.

The New York State Power Authority said it will seek additional help to pay for the \$1.5 billion project before agreeing to buy the output, a decision necessary before construction can proceed. The plant is supposed to be in operation by 2013.